## (19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 3 March 2005 (03.03.2005)

(10) International Publication Number WO 2005/020120 A3

- (51) International Patent Classification7: A61B 5/04
- G06K 9/00,
- (21) International Application Number:

PCT/IB2004/002629

- (22) International Filing Date: 6 August 2004 (06.08.2004)
- (25) Filing Language:

(26) Publication Language:

English

(30) Priority Data: 60/496,418

20 August 2003 (20.08.2003)

- (71) Applicant (for all designated States except US): KONIN-KLIJKE PHILIPS ELECTRONICS N.V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).
- (71) Applicant (for AE only): U.S. PHILIPS CORPORA-TION [US/US]; 1251 Avenue of the Americas, New York, NY 10510-8001 (US).

- (72) Inventor; and
- (75) Inventor/Applicant (for US only): ALI, Walid [EG/US]; 595 Miner Road, Cleveland, OH 44143 (US).
- (74) Common Representative: KONINKLIJKE PHILIPS ELECTRONICS N.V.; c/o LUNDIN, Thomas, M., 595 Miner Road, Cleveland, OH 44143 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH,

[Continued on next page]

## (54) Title: A SYSTEM AND METHOD FOR DETECTING SIGNAL ARTIFACTS

Receive event signal(s) Step 100 Determine Global Correlation Step 110 Determine Local Correlation Step 120 Determine Deviation between the Local and Global Correlation Matrixes Step 130 Determine average Deviation Step 140 Provide Alarm indication Step 150

(57) Abstract: A method and system are disclosed that detect signal artifacts in one or more event signals. The system and method may be used with a patient monitoring apparatus that adapts to a patient's condition and distinguishes between clinically significant changes in the patient's state verse clinically insignificant changes.

## WO 2005/020120 A3

GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

## Published:

- with international search report

- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- (88) Date of publication of the international search report: 19 May 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.